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R/003/60/011/007/001/003

A125/A026

On the Electrolytic Production of Metallic Titanium

sodium chloride molten in a protective atmosphere of argon ($K_2TiF_6 - NaCl$). The laboratory apparatus consists of: a) the argon purifying installation, and b) the electrolysis cell. The argon purifying installation is used for the removal of noxious impurities, i.e., oxygen, nitrogen and water. The electrolysis cell consists of the cell itself and the heating furnace. The operation temperature ranged from $700^{\circ}C$ to $820^{\circ}C$, with $760^{\circ}C$ as the most efficient temperature. The current intensity varied from 10 to 30 amp, and the current density from 120 to 750 amp/dm^2 . The voltage on the plugs of the cell was 5 - 6 v. Table 1 presents the values of the intensity and voltage in function of the time. The electrolysis procedure lasted 1 - 2 h and the cooling procedure 2 h. The deposited titanium was introduced into distilled water of $60^{\circ}C$ maximum, where the salt content of the deposited metal was dissolved. The drying was performed in a vacuum at a temperature lower than $60^{\circ}C$. Coal, oxygen and iron are impurities which are present in larger quantities. Reference is made to the source of these impurities and to some methods of reducing them. The "Debyeogram" (Fig. 8) performed on a laboratory sample shows that this sample has parameters which are very close to the parameters of a product with a purity of 99.9%, indicated in technical literature. Table 3 presents some values computed on the basis of the "Debyeogram" and compared with some values of usual titanium and 99.9% pure tita-

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Card 2/3

85371

R/003/60/011/007/001/003
A125/A026

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nium, respectively. The current efficiency during the electrolysis varied between 45 and 75%, and the power consumption was around 26 kwh/kg of titanium. There are 4 figures, 5 photos, 1 set of photos, 3 tables and 12 references: 5 Soviet, 1 Rumanian, 4 English, 1 German and 1 Hungarian.

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Card 3/3

85172

R/003/60/011/009/001/002
A125/A026

18.0010 d/w 1273, 1087

AUTHORS: Craiu, Viorica; Anghel, Paula; Călușaru, A.; - Engineers

TITLE: Electrolytic Production of Zirconium Metal ↗

PERIODICAL: Revista de Chimie, 1960, Vol. 11, No. 9, pp. 509 - 514

TEXT: Subject article deals with the method of electrolysis for the production of pure zirconium metal. Its production was studied by Troost; Marden and Rich; Driggs and Lilliendahl; Kroll and assistants; Steinberg and assistants (Ref. 2); Creamer, Chambers and White; Raynes, Thelleman, Steinberg and Wainer (Ref. 3); Anchieux and Dauphin; and Chauvin, Coriou and Huré (Ref. 4). In a previous work (Ref. 5) the authors published some experimental data on the electrolytic deposition of titanium metal. The data presented in subject article were obtained in the same apparatus (Figs. 1 and 2). The experimental procedure is based on the electrolysis of potassium fluozirconate, dissolved in molten sodium chloride. The authors studied the influence of the following parameters on the efficiency of substance and current: a) current density; b) temperature; c) composition of the electrolyte; d) electrolysis time; e) shape of the cathode; and f) nature of the cathode. a) The current density has a complex influ-

Card 1/3

85172

R/003/60/011/009/001/002

A125/A026

Electrolytic Production of Zirconium Metal

ence depending on the interval of the current density at which the work is performed, on the dimensions and the shape of the cell and on the dimensions of the cathode. A high current density proved to be advantageous (Table 1). b) Influence of temperature (Table 2): A temperature of 800°C represents a minimum value. By increasing it to 850°C, the deposition procedure is improved. Above this temperature, the variations are smaller. Thus, 850°C are the maximum limit. c) Influence of the composition of the electrolyte (Table 3): Practically, it proved to be advantageous to select a ratio of $K_2ZrF_6/NaCl$ equal to 1/2. d) Influence of the electrolysis time (Table 5): The most advantageous electrolysis time was found to be 2 - 2.5 h. e) Shape of the cathodes (Table 6): Only cylindrical and truncated cone-shaped cathodes were tested, but they proved to be identical in their efficiency. f) Nature of the cathodes: With regard to the current efficiency, the nature of the cathodes has no influence on the procedure, but influences the purity of the product. Steel and graphite cathodes have been excluded. Comparing a "V2A" cathode with a nickel cathode, the iron content of the zirconium produced was by 0.5% higher in case of the "V2A" cathode. Molybdenum cathodes are too expensive. The electrolytic zirconium was analysed spectrographically to establish the content of Cr, Cu, Mn, Sn, Al, Si, Fe and Hf. Ni and Ca could not be found. The spectrographical analysis was accomplished

Card 2/3

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27001 R/003/61/012/003/002/004
D238/D302

AUTHORS: Niederkorn, I., Engineer, Candidate of Technical Sciences; Teodorescu, R., Engineer; and Călușaru, A., Engineer, Candidate of Technical Sciences

TITLE: Production of spectrally pure silicon by the dissociation of silanes

PERIODICAL: Revista de chimie, v. 12, no. 3, 1961, 144-150

TEXT: This study is part of a search for a convenient industrial preparation of ultra pure Si [Abstractor's note: See Niederkorn et al., Rev. Chim. 12, 137, 1961]. The method studied consists in preparing SiMg_2 from the elements, reacting SiMg_2 with HCl to form a mixture of silanes, $\text{Si}_n\text{H}_{2n+2}$, and decomposing the latter on a hot surface, where Si is deposited. Although poor yields averaging 20% were reported, this method is thought to be advantageous for the following reasons: (a)

Card 1/6

27001

R/003/61/012/003/002/004

D238/D302

Production of spectrally...

The obvious case of purifying gases (b) The possibility of using glass, instead of quartz, for a large part of the apparatus (c) The limited number of volatile hydrides (d) the by-product is hydrogen, easy to handle. (e) the high performance of resulting silicon, crystals made of the latter having a resistivity of several thousands of ohms. Specifically, SiMg_2 was prepared by heating a mixture of technical Si and Mg powder at 650°C for 10-15 min, in an atmosphere of H_2 . The apparatus for the generation and subsequent dissociation of the silane mixture is shown in Fig. 2 and functions as follows: A controlled flow of purified H_2 forces a suspension of SiMg_2 in glycerine from the feeding bottle, 2 into a 40 lit. polyethylene container, 3: Here, silanes are generated by adding aqueous HCl flowing through R. The rate of generation is regulated by a contact manometer, 7, which opens the magnetic valve V whenever this rate increases. The valve causes the level of water in 1 to fall and thus the feed of SiMg_2 is cut off. The mixture of silanes and water vapors is freed from volatile hydrides in the heated

Card 2/6

27001 R/003/61/012/003/002/004
D238/D302

Production of spectrally...

column, 8 (at 350°C) and then cooled in 9; water is removed in 10 and the last traces of it combine with SiCl_4 . The resulting silica aerosol is trapped in 12. Boranes are retained by ground SiH in 13 and aerosols - by glass spheres coated with silicon grease, in 14. The dissociation was studied by three methods, namely by deposition on quartz tube, Ta tube, and Ta wire, respectively. The quartz tube, 20, is protected by another quartz tube, 21, and heated by means of the furnace, 19. The Ta tube, made from 0.2 mm. Ta. sheet, is protected by means of an opaque quartz tube and heated in the same manner as 19. The apparatus for deposition on the Ta wire, 17 consists of water cooled copper pipes (serving as contacts); of a Ta wire connected to these pipes via Mo plates; and of a perforated quartz fork placed coaxially with the wire. The silanes enter the apparatus through the hollow fork and the Si formed is deposited on the wire. Any Si dust carried with the gases is collected in the cyclones, 22. Experimental results: (1) Generation of silanes. The gas mixture in 3 contained SiH_4 , 2.1%;

Si_2H_6 1.7%; and Si_3H_8 , 1.3%. The reaction proceeds up to 4 hours after

Card 3/6

27001.

R/003/61/012/003/002/004
D238/D302

Production of spectrally...

the feed of MgSi_2 has been cut off. The acid sludge contains a grey residue. (2) Purification of silanes. The cooler was lined with a deposit of SiO_2 . Otherwise the purification was satisfactory, (3) Dissociation. Most of the pertinent data were gathered from the deposition on a quartz tube. Si deposited at 1000°C and over is metallic in appearance, while at lower temp. a grey powder is formed. The authors concluded that it was formed from gas molecules which did not dissociate on the walls and used deposition tubes with smaller diameters in order to increase the radial velocity of the gas. Consequently, the proportion of by-product was reduced from 10% (with a tube of $\varnothing 30\text{ mm}$) to 1-2% when using a tube of $\varnothing 12\text{ mm}$. The yields varied from 10 to 22%. The product was spectrally pure and contained less than $10^{-4}\%$ of Ca, Cu etc. and approx. $10^{-7}\%$ of B. The deposition on a Ta tube yielded a product contaminated with Ta. Two runs with Ta wire conducted, at 900°C and 1000°C respectively. There are 4 figures, 1 table and 14 references: 7 Soviet-bloc and 7 non-Soviet-bloc. The references to the English-language publications read as follows: Thorpe's Dictionary of Applied Chemistry, vol. X Longmans, Londra 1952; Kirk - Othmer, Encyclopedia of Chemical

Card 4/6

Production of spectrally...

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D238/D302

Technology, vol. XII, Interscience, New York, 1954; Bell Telephone Manufg. Co. - Brev. Belg. 565604/12.IX.1958; International Standard Electric Corp. Brev. Fr ad. 70026/3.II.1959.

Legend to Fig. 2. Laboratory installation for the production of silicon from silanes. 1) automatic manometer, 2) feeding bottle, 3) silane generator, 4) beaker with water, 5) bottle, 6) liquid valve, 7) contact manometer, 8) heated column, 9) cooler, 10) CaCl_2 column, 11) diatomaceous earth column, 12) container for SiCl_4 , 13) SiH column, 14) container with greased glass spheres, 15) manometer, 16) flowmeter, 17) apparatus for dissociation on Ta wire, 18) manometer, 19) furnace, 20) quartz tube for dissociation, 21) quartz tube for protection, 22) cyclones, 23) to magnetic valve V, T - thermometer with relay, V - magnetic valve, $R_0 - R_6$ - stopcocks

Card 5/6

(For Fig. 2 see next card)

CALUSARU, A.; RIPEANU, S.; BENES, L.

On the structure and magnetic characteristics of the electrolytic cobalt strata used for neutron polarization. Studii cerc fiz 14 no.3:239-247 '63.

1. Institutul de fizica atomica Bucuresti.

CURTEANU, G., dr.; COSTA, A., dr.; VIAD, I., dr.; FALICIAN, V.V., dr.
GALUSKID, I., dr.

Anatomoclinical aspects of oncological pathology in children.
(Anatomoclinical study of 157 verified cases). Pediatris
(Bucur.) 13 no.52421-245 2-1964

1. Lucrare efectuata in Spitalul de copii, Oradea (directori:
dr. L. Kende) si Insectara Spitalului clinic de adulti nr. 2,
Cluj (directori: prof. I. Muresan).

CALUSINSKI, Bogdan, mgr.; GALLAR, Jan, mgr. inz.; SKORUPA, Andrzej,
mgr. inz.

Testing pressure welds in steel constructions with the ZSK-2
magnetic flaw detector. Przegl. spaw 15 no.10:228-229 0'63

1. Akademia Gorniczo-Hutnicza, Krakow.

CALUSINSKI, Bogdan, mgr.; GALLAR, Jan, mgr. inz.; SKORUPA, Andrzej, mgr inz.

M netic method of testing butt welds. Przegl spaw 16 no.7/8:
189-190 JI-Ag'64

1. Technical University, Czestochowa (for Calusinski). 2. School
of Mining and Metallurgy, Krakow (for Gallar and Skorupa).

L 61967-65 EWP(c)/EWP(v)/T/EWP(k)/EWP(1)/ETC(m) Pf-4 III

ACCESSION NR: AT5015383

PO/2531/64/000/005/0145/0150

AUTHOR: Calusinski, Bogdan; Gallar, Jan

TITLE: Investigations on a prototype of the ZSK-1 transistorized magnetic flaw detector

SOURCE: Czestochowa. Politechnika. Zeszyty naukowe, no. 24, 1964. Nauki podstawowe, no. 5, 145-150

TOPIC TAGS: magnetic defectoscope, flaw detection, transistorized flaw detector

ABSTRACT: In the introductory section, the paper briefly discusses the present-day achievements in the testing of magnetic materials using magnetic flaw detectors. The differential method and the bridge method of magnetic flaw detection are discussed. The design for a magnetic flaw detector using the bridge method is introduced. The circuit is shown in Fig. 1 of the Enclosure. A one-stage amplifier is used. The high sensitivity of the detector and the high gain of the amplifier are demonstrated. The current was measured at 1.2 A. The appearance of a flaw is given. Appearance of a flaw is given. The existence of a flaw, and the signal intensity provided is given. The method of measuring the instrument sensitivity is given. The instrument can detect, with sufficient certainty, flaws 1 mm in diameter at a depth of 1 mm.

Cord 1/3

L 61367-83

ACCESSION NR: AT5015383

surface. Various possible applications of this instrument are given. Orig. art. has:
3 figures.

ASSOCIATION: Katedra Fizyki, Katedra Mechaniki i Wytrzymałości Materialow, Politechnika Częstochowska (Departments of Physics and of Mechanics and Strength of Materials, Częstochowa Polytechnic Institute)

SUBMITTED: 00

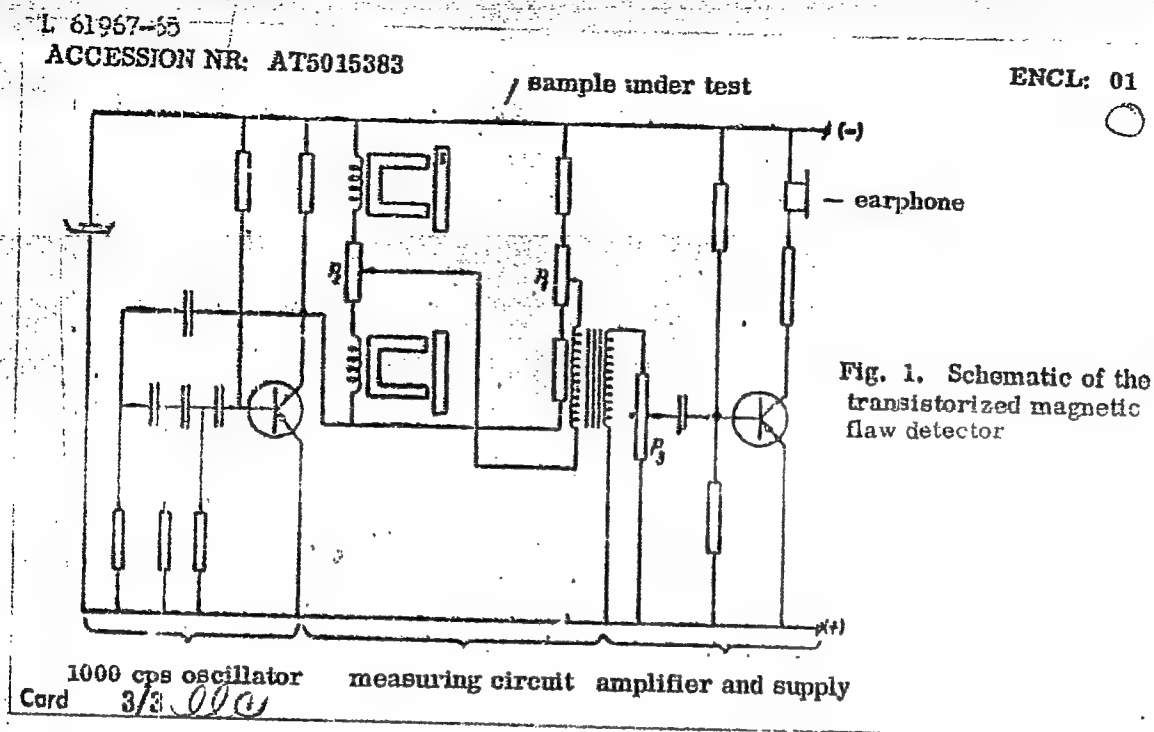
ENCL: 01

SUB CODE: EC, IE

NO REF SOV: 001

OTHER: 003

Card 2/3



L 38141-65 EST(d)/EWP(c)/T/EWP(v)/EWP(k)/EWP(l) Pf-4

ACCESSION NR: AP5006980

P/0034/65/000/002/0082/0083

AUTHOR: Calusinski, B. (Master); Colecki, J. (Docent, Doctor, Engineer);
Gallar, J. (Master engineer)

TITLE: The transistorized magnetic flaw detector ZSK-2

SOURCE: Pomiar, automatyka, kontrola, no. 2, 1965, 82-83

TOPIC TAGS: Flaw detector, magnetic flaw detector, transistorized flaw detector,
internal flaw / ZSK-2 flaw detector

ABSTRACT: The paper discusses the methods of magnetic flaw detection used so far from the standpoint of detecting flaws located far below the surface (internal flaws). The paper then presents methods at present which can detect flaws mm with the exception of the expensive x-ray methods. The paper describes in detail and discusses the principle of operation and the construction of an instrument for detecting deep lying flaws (Polish Patent No. 190609). Fig. 1 of the paper shows a schematic of the measuring system of the instrument and Fig. 2 shows a schematic of the flaw detector. The frequency of the generator of sinusoidal current is 100 Hz and the oscillation amplitude is about 3 volts. The voltage gain of the selective amplifier is 100. A procedure for using this instrument is given.

Cord 1/42

AP5006980
ACCESSION NR: AP5006980

Orig. art. has: 3 figures.

ASSOCIATION: Politechnika Czeslchowska (Czestochowa Polytechnic Institute)
ul. Armii Krajowej 18, 41-200 Czestochowa, Poland
Academy)

SUBMITTED: 00

ENCL: 02

SUB CODE: EC, IE

NO REF SOV: 003

OTHER: 005

Card 2/4

QALUSITA, M.; DUMA, M.; CRETESCU, A.

Televoltmeter and teleamperameter for a physical circuit. p. 230

AUTOMATICA SI ELECTRONICA (Asociatia Stinifica a Inginerilor si tehicienilor din Rominia)

Vol. 2, no. 5, Sept/Oct. 1958

Bucuresti, Rumania

Monthly list of European Accession Index (EEAI) LC Vol. 8, No. 11

November 1959

Uncl.

CALUSITA, M.

ve.

Elements for the calculation of electronic continuous-current analogue computers. p. 68

AUTOMATICA SI ELECTRONICA. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania) Bucuresti, Rumania. Vol. 3, no. 2, Mar./Apr. 1959

Monthly List of East European Accessions. (EEAI) LC, Vol. 8, no. 9, ^{Sept.}1959
Uncl.

HERSCOVICI, Harri, ing.; CALUSITA, Mioara, cercetator, ing.; ROISMAN, Wilhelm, cercetar stagiar, ing.; NICA, Lucian, cercetar stagiar; MARCUT, Iosif, cercetator

Unified electronopneumatic system for the automatic regulation of industrial processes. Pt.1. Automatica electronica 6 no.1: 4-11 Ja-F '62.

1. Laboratorul de reglatoare automate al Institutului de Cercetari Electrotehnice. 2. Sef Laboratorului de reglatoare automate al Institutului de Cercetari Electrotehnice (for Herscovici).

CALUSITA, Mioara, ing.

Connection of the controller with the output regulator in
the regulating circuits of industrial processes. Automatica
electronica 7 no.6:275-280 N-D'63.

CALUSITA, Mioara, ing.

Starting signals of the PID electronic regulators.
Automatica electronica 8 no. 1: 39-40 Ja-F '64.

CALUSITA, M.

Electronic regulators for industrial processes. Metrologia
apl 11 no. 10:457-466 0 '64.

CALUSITA, H.

Electronic governors for industrial processes. Metrologia apl 11 no.11:
510-517 N '64.

CALUSITA, M., ing

Electronic governors for industrial processes. Pt.2.
Metrologia apl 11 no.12:540-548 D '64.

NICOLAE, Mihail, dr.; BOLOGA, L., dr.; DIACONESCU, C., dr.;
CALUTU, I., chim.; KOCH, Maria, felcer

Observations on former epidemic hepatitis patients. Med. intern.
15 no.10:1225-1232 '63.

1. Lucrare efectuata in Spitalul unificat Hunedoara.
(INDUSTRIAL MEDICINE)
(HEPATITIS, INFECTIOUS)

YUGO

✓ Polarographic reduction of the carbonyl group of aromatic and aryl alkyl ketones. Claudio Calzolari and Claudio Furlani (Univ. Trieste). *Ann. chim. (Rome)* 44: 358-70; *Boll. sci. ser. chim. ind. (Bologna)* 12, 42-9 (1954); cf. C.A. 49, 11308A. — On reviewing polarographic reductions of ketones (39 references) it is concluded that at least one double or aromatic bond in conjugation with C=O is required. Evidence is cited for a 3-electron reduction mechanism leading to the secondary alcs. under ordinary conditions. PhCO (I) shows 2 equally high waves in acid soln. that merge into one of double height starting at pH 7. Substituents on I generally follow Hammett's relation (with pos.) in affecting the ease of reduction ($E_{0.1}$ of the wave corresponding to the first electron). Reduction of PhCOMe (II) and derivs. in acid soln. shows 1 wave (A) which with rising pH migrates to more neg. potentials and finally gives way to another wave (B) at a const. more neg. potential; both A and B representing 2-electron steps. This is explained as the ketonic form reacting in acid soln. and the enolate ion in base. Wave II A is affected by substituents similarly to $E_{0.1}$ of I, but II B is hardly affected. This agrees with the proposed interpretation, since C=C of the anion is known to be less polarizable than C=O of the keto form. In *2,2,6,6-tetramethyl-3-naphthyl methyl ketone*, wave II A is split in 2 stages, which is ascribed to the intermediate radicals being stabilized by resonance. W. Baranich

~~CAMALESA~~, N. (Gralova)

Achievements in the improvement of animals in Oltenia.
Natura Biologie 15 no. 3: 49-55 My-Je '63.

1. Sef de lucrari.

I. 04023-67 EWP(m)/EWP(t)/ETI LJP(c) FDN/JD/WW

ACC NR: AP6025066

SOURCE CODE: RU/0019/66/011/002/0353/0361

AUTHOR: Camarasescu, N.

ORG: Institute of Fluid Mechanics, Academy of the Socialist Republic of Rumania (Institut de
Mechanique de Fluides de l'Academie de la Republique Socialiste de Roumanie)

TITLE: Visualization of lateral fluid jets

SOURCE: Revue Roumaine des sciences techniques. Seria de mecanique appliquee, v. 11, no.
2, 1966, 353-361

TOPIC TAGS: fluid jet, jet flow, subsonic wind tunnel, motion picture photography

ABSTRACT: A procedure is described which permits visualization of a lateral fluid jet ejected spanwise from the end of a rectangular low-aspect-ratio wing in a subsonic wind tunnel. The technique is based on the diffusion of light by tiny water particles introduced into the jet in the form of vapor. This makes it possible to record the formation and twisting of the jet sheet on a motion picture film and to observe the effect of a variation of the angle of attack of the wing or of a variation of the jet injection rate on the shape of the jet sheet. The photographs obtained reveal an increased circulation about the wing due to the "elongation" of the wing by the jet, and an additional increase in circulation due to the twisting of the fluid portion of the wing.

Card 1/2

UDC: 532

L 04023-67

ACC NR: AP6025066

Orig. art. has: 9 figures and 3 formulas.

SUB CODE: 1420/ SUBM DATE: 25Nov65/ ORIG REF: 001/ OTH REF: 002

Cord 2/2 mt

CAMBA, Djorđe Djorđević

On postoperative ileus. Apropos of 2 clinical cases. Srpski
arh. celok. lek. 90 no.10:983-987 0 '62.

1. I hirurska klinika Medicinskog fakulteta Univerziteta u
Beogradu Upravnik: prof. dr. Bogdan Kosanovic.
(INTESTINAL OBSTRUCTION)
(SURGERY, OPERATIVE)

CAMBEI, BORUSLAY

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Mineralogical and Geological Chemistry

(13)
Historical account of Soviet mineralogy and geochemistry.
Borislav Cambei and Jan Saur. Publ. Bratislava, Slo-
vakia, Geol. Journ. 3, 6-44 (1952). Portraits are included
of M. V. Lomonosov, V. M. Severskiy, N. I. Kolsharov,
P. Y. Gerasimov, A. V. Goplin, B. S. Fedorov, V. V.
Dokuchaev, V. I. Vernadsky, A. E. Herzen, and S. S.
Orlov.

Michael Fleischer

EH

9-16-54

OAMBEL, B.

CARTEL, B.

Mineral wealth of the Little Carpathians and development of mining in Slovakia.
p.660. (Priroda a Spolocnost. Martin. Vol. 2, no. 11, 1953.

SC: Monthly List of ^{East} European Accession (SEAL), LC, Vol. 4, No. 6,
June 1955, Uncl.

CAMBEL, Bohuslav

USSR.

White barite veins in the region of Krásnohorsk Podhrad.
Bohuslav Cambel (Tech. Hochschule, Bratislava, Slovakia).
Geol. Surv. 3: 109-20 (1963) (German summary).—Hydro-
thermal veins contain barite, quartz, pyrite, siderite, tetra-
hedrite, and specular hematite. Michael Fleischer

cc 83H

USSR :

The geochemical, genetic, and geological relations in the ore deposits of the Little Carpathians. Bohuslav Camber and Geza Kupco (Tech. Hochschule, Bratislava, Slovakia). Geol. Sbornik 3, 135-82 (1953) (German summary).—Two distinct phases of mineralization, not previously recognized, are distinguished. The older, related to gabbroic intrusives, consists of pyrite-pyrrhotite deposits; the younger, related to granitic rocks, includes Au and stibnite deposits. Qual. spectrographic analyses are given of 131 rocks and minerals, including quartz, ankerite, pyrite, pyrrhotite, sphalerite, and stibnite. Michael Fleischer

CAMBEL, Bohuslav

USSR:

~~The ores of Castey. Bohuslav Cambel (Tech. Hochschule, Bratislava, Slovakia). *Geol. Slovaki* 3, 207-313 (1953). Quartz-pyrite-ankerite veins with minor chalcopyrite and tetrahedrite are described. Chem. analyses are given of 5 ankerites and of the ore. M. F.~~

AC 2211

CAMBEL, B.

Geologic and petrographic problems concerning the northeastern
part of the crystalline masses in t e Little Carpathians. p. 3.

GEOLOGICKE PRACE, CZECHOSLOVAKIA

No. 36, 1954.

SOURCE: East European Accessions List (EEAL) Library
of Congress. Vol, 5. No. 1, January, 1956.

CAMBEL, B.

CAMBEL, B. GRANITOID ROCKS OF TECTONIC ORIGIN IN THE LITTLE CARPATHIAN MOUNTAINS. P.143.

Vol. 7, no. 1/2, 1956, GEOLOGICKY SBORNIK, BRATISLAVA, CZECHOSLOVAKIA.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 10, Oct. 1956.

Up
md
Genetic problems of ore formation in the Little Carpa-
thians. Bohuslav Cambel (Komensky Univ., Bratislava,
Czech.). *Ort. práce* (Bratislava) (Rept. Ser.) 9, 5-27
(1950) (German summary); cf. *C.A.* 49, 3744c. Four dis-
tinct periods of ore formation are distinguished. The pyrite
deposits are related to ophiitic magmas. M. Wipperfurth

The granite rock in the study area
geology. Antonín Čadež and Jan Valach (Komenský
Univ., Bratislava, Czech.). Geol. Práce (Bratislava) No.
12, 1964, p. 1-12. 12 p. Includes a detailed topographic sketch.

CAMBEL, Bohuslav

Activity and tasks of the Mineralogical and Geochemical Section
of the Carpathian-Balkan Geological Association. Cas min geol
8 no.4:408-410 0 '63.

CAMBEL, Bohuslav, prof. dr.

Critical remarks on the opinion about the age of some
granitoid rocks of the Low Tatra Mountains. Geol sbor 15
no.1:157-162 '64.

1. Chair of Mineral Raw Materials, Faculty of Natural
Sciences, J.A. Comenius University, Bratislava,
Jiraskova 12.

CASTAIGNE, P.; CAMBIER, J.; ESCOURRELLE, R.; MASSON, M.; VITAZAL, J.

Apropos of cerebellar atrophy. Cesk. neural. 28 no.1:7-13
Ja '65.

1. Klinika nemoci nervove soustavy lekarske fakulty University v
Parizi (prednosta prof. dr. P. Castaigne) a Neurologicka klinika
fakulty vseobecneho lekarstvi Karlovy University v Praze (pred-
nosta akademik K. Henner).

GAMBIR, S

1/2

ROMANIA

POPESCU-BARAN, M., Dr., CIOBETEA, Gr., Dr., IONICA, C., Dr.,
TUTORIU, C.D., Dr., VIOR, C., Veterinarian, EPU, Eng., Veteri-
narian, MARCEA, E., Veterinarian, JIVOIN, P., Dr., GAMBIR, S.,
Dr., NITOIU, L., Dr., and PREDOIU, I., Dr., of the "Pasteur"
Veterinary and Biological Products Research Institute (Ins-
titutul de Cercetari Veterinare si Biopreparate "Pasteur",
CREANGA, E., Dr., PAUR, Gh., Veterinarian, and DIACONU, M.,
Veterinarian, of the Scientific Control Laboratory for Bio-
logical Products and Drugs for Veterinary Use (Laboratorul
de Control Stiintific al Produselor Biologice si Medicamen-
toase de Uz Veterinar), and VOINOV, E., Dr., of the Central
Agricultural Research Institute (Institutul Central de
Cercetari Agricole).

"Improvement of Animal Tuberculosis Allergical Diagnosis in
Romania by Single and Simultaneous Tests Using Purified
Tuberculine (2PD)."

Eucharest, Revista de Zootehnie si Medicina Veterinara,
Vol 13, No 1, Jan 1983, pp 50-53.

1/2

ROMANIA

Bucharest, Revista de Zootehnie si Medicina Veterinara,
Vol 13, No 1, Jan 1963, pp 50-53.

Abstract: [author's English summary modified]: Two types of purified tuberculin (PPD) were prepared; that for mammals was standardized to a content of 100,000 T.U./ml, and that for birds to 25,000 T.U./ml. The results of large-scale tests on epizootically different animals permitted the practical application of the single tuberculin test with PPD to cattle, pigs and birds. The use of PPD allowed the introduction of the simultaneous testing of cattle for tuberculosis diagnosis, bringing about a clarification of the tuberculin reactions, a saving of time and the fact that only the animals suffering from tuberculosis, among those reacting to tuberculin, have to be sacrificed. Includes 1 Russian, 7 Western and 11 Rumanian references.

2/2

RUMANIA

TUDORIU, C.D., Dr, IONICA, C., Dr, ~~CAMBIR, S., Dr~~, and PREDOIU, A., Dr, of the "Pasteur" Institute of Veterinary Research and Biological Products (Institutul de Cercetari Veterinare si Biopreparate "Pasteur"), PARASCHIVESCU, M., Veterinarian, SESERMAN, O., Eng, and PARASCHIVESCU, G. of the Zootechnical Research Institute (Institutul de Cercetari Zootehnice), and ANDREI, M., Dr, of the Constanta Regiune Veterinary Laboratory (Laboratorul Veterinar Regional Constanta).

"Aspects of Br. ovis Infection in Reproducing Rams."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 13, No. 9, Sep 63, pp 74-80.

Abstract [Authors' English summary modified]: One of the main causes of ram infertility is infection with Br. ovis which brings about partial or complete degradation of the sperm. As the most dangerous epizootic moment for transmitting the disease is natural interbreeding, artificial insemination in infected flocks is recommended. The changes in the sperm diagram of infected animals involve the density, mobility and presence of materials other than the sperm, such as epithelial and white cells and Br. ovis. Volume changes are not characteristic, but there may be color changes in the ejaculated sperm.

Includes 1 table and 23 Eastern-European and Russian references.

1/1

CAMBOLI,  DIMITRIE

17 5
✓ A new sensitive method of detecting nickel. Virgil Armeanu, Dimitrie Camboli, and Cornelia Iancu (Polytech. Inst. Bucharest). *Rev. inst. politehnic Bucuresti* 20, No. 2, 81-4 (1968) (in French); cf. following abstr.—Dry a Ni ion soln. on filter paper, add a drop of 1% alc. β -furolin oxime, and expose the paper to NH_3 vapor to yield a tan ppt. This order of mixing reagents gives the max. color intensity. The limit of detection is 0.32γ Ni, and the diln. limit is 2×10^{-4} . Colors or ppts. are also given by Mn, Cd, Zn, and ferric ions; and the test fails in the presence of 10:1 ratios of Al, Sn, Sb, As, or chromic ions to Ni.
J. P. Phillips—

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances.

E-2

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, 4328

Author : Armeanu, V., Carbolli, D., Iancu, C.

Inst - - - : Given on card 2/2.

Title : A New Sensitive Method for the Detection of Cobalt.

Orig Pub : Rev Chin, 2, No 4, 218-219 (1958) (in Rumanian with summaries in German, French, English, and Russian)

Abstract : The authors have developed a new method for the detection of Co(II) using β -furoinoxime (I); this reagent appears to be more sensitive than α -furoinoxime (RZhKhim, 1958, 46376). The best results were obtained with a dropping analytical procedure on filter paper, provided the prescribed order of operations is observed. One drop of the solution to be analysed is placed on a piece of filter paper, the solution is dried, and one drop of I solution is added after which the paper is placed over NH_3 vapors. When Co(II) is present, a brown spot will appear.

Card 1/2

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, 4328

The detectable minimum of Co is 0.16 μ ; the limiting dilution is 10^{-5} . The determination of Co is interfered with by the presence of a ten-fold excess of Bi(III) a 20-fold excess of Cr(III) and Al(III), a 100-fold excess of AsO_3^{3-} , Sb(III), Sn(II), and a 200-fold excess of Pb(II) and Hg(II). Under the conditions described Mn(II) gives a brown spot and Cd(II) and Zn(II) give a yellow spot. --
B. Manole

ASSOCIATION (Institute) : Bucharest Polytech Inst. Romania

Card 2/2

- 24 -

RUM/3-59-9-13/67

5(3)

AUTHOR: Armeanu, V., Camboli, D.

TITLE: The Behavior of β -Furoin-Oxime¹ Toward Ions of Manganese, Zinc, and Cadmium

PERIODICAL: Revista de chimie, 1959, Nr 9, pp 529-530 (Rumania)

ABSTRACT: The article contains the results obtained by the authors in their research on the influence exercised by the modification of some substituents in the molecule of certain complex-generating substances on the analytical properties of complex combinations. The authors used ions of Mn^{2+} , Zn^{2+} , Cd^{2+} , utilizing an alcoholic solution 1% of beta-furoin-oxime. The order of addition of the reagents is important. The authors did their tests in micro-samples, on a porcelain plate, on microscope blades, and on filter paper, by drops. The working conditions were varied and the optimum conditions determined. The determination of the limit of sensitivity is described. The present note

Card 1/2

RUM/3-59-9-13/67

The Behavior of β -Furoin-Oxime Toward Ions of Manganese, Zinc and Cadmium

constitutes an appendix to the authors' papers about the behavior of alkyl-oximes in the face of a series of ions. There is 1 graph, 1 table, and 7 references, 5 of which are Rumanian and 2 Soviet. ✓

Card 2/2

ARMEANU, V.; AMERUS, C.; CAMBOLI, D.

Behavior of β -furoin-oxime in presence of the Pt^{4+} and Pd^{2+}
ions. Rev chimie Min petr 12 no.10:615-616 0 '61.

SPACU, P., prof.; CAMBOLI, D.

Application of sodium nitroprusside in chemical analysis.
Analele chimie 17 no. 1:135-145 Ja-Mr '62.

1. Membru al Comitetului de redactie, "Analele Romino-Sovietice,
Chimie" (for Spacu).

LUPAN, M., ing.; NICULESCU, D.D., ing.; TANNENBAUM, M., ing.; CAMBUREANU, A.,
ing.; LOBEL, L., ing.; DUMITRESCU, D.V., ing.

Some aspects and results of technical and scientific cooperation
between the Institute of Building Research and Construction
Building Economics, and the Progresul Plant of Prefabricated
Parts, Bucarest. Rev constr si at constr 15 no.9:493-497 S'63.

CAMEK, J.

PHASE I BOOK EXPLOITATION

Z/6284

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines [collection of articles]). Prague, Nakl. ČAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Končícký.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components,

burning of fuel in combustion chambers, axial compressors, and characteristics of turbines manufactured in Czechoslovakia.

Basic Problems in the Construction (Cont.)

z/6284

J. Čamek (State Research Institute for Heat Engineering, Prague). Theoretical Study on the Possibility of Obtaining Flatter Turbine Stage Characteristics $\eta_u = f(u/c_{ad})$.

547

I. Zuber (State Research Institute for Heat Engineering, Prague). Experimental and Theoretical Results in the Field of Combustion Chambers

571

J. Baloš (Klement Gottwald First Brno Armament Plant, Brno). A Combustion Chamber for the PBZKG 1-Mw Turbine [PBZKG is Czech abbreviation for Gottwald Plant]

589

O. Schůrek (Aviation Research and Testing Institute, Letňany). Burning of Fuel in Combustion Chambers of Jet Engines

603

AVAILABLE: Library of Congress

SUBJECT: Aerospace

Card 8/8 2/2

AD/jsj/jk
3/21/63

CAMEK, JOSEF

10(0) 26(1)
 PRACE I BOKU REKONSTRUKCE
 Československé Akademie věd. Sekce technická
 Praha
 Práce I BOKU REKONSTRUKCE (Flow Through Turbomachinery) Praha, Matlad-
 ská Československé Akademie věd, 1958. 415 p. (Series: Iti; Športu
 ústavu pro výzkum strojí) Série alij. 1, 2, 30 copies printed.
 Matladská Ed.: An. Aris, Engineer, Doctor, Corresponding Member of the Czechoslo-
 vanská Akademie věd; Bep. Ed.: Ladislav Kral; Tech. Ed.: František
 Kral.
 PURPOSE: This collection of papers is intended for engineers and scientific
 workers in the field of turbomachinery.
 COVERAGE: The collection covers turbomachinery theory, investigations of the
 flow of working substance in basic elements of turbomachinery, phenomena ac-
 cording to flow and variable with time, and investigations of various prob-
 lems on experimental machines and models. A Russian and an English summary follows
 each paper. No personalities are mentioned. There are 159 references. 73
 Czech, 57 English, 38 German, 20 Russian, and 1 Dutch.

IV. RESEARCH WITH MODEL MACHINES

10. Kral, Zdeněk, Engineer, VÚM. An Approximate Method of Flow
 Analysis in Air Turbomachine Elements With An Example Applied to
 Axial Blowers 277
11. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. An-
 proximate Method of Flow Analysis in Air Turbomachine Elements With An
 Example Applied to Axial Blowers 289
12. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 305
13. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 310
14. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 319
15. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 348
16. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 351
17. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 355
18. Kral, Zdeněk, Engineer, and Pils, Milan, Engineer, VÚM. Experi-
 mental Investigation of Flow in Axial Compressor for High Circumference Speeds
 364

V. MEASURING INSTRUMENTS

15. Petr, Zdeněk, Engineer, VÚM. Directional Probe for Three-dimensional Investigation of Flow 405
16. Šumanec, Ladislav, Engineer, VÚM. Electric Measurement of
 Pressure 422
17. Šumanec, P., Engineer, VÚM. Torsional Dynamometer 443

Card 7/7

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 11-29-59

L 57442-65 EPA/EWP(w)/EWP(z)/EPR(n)-2/EPR/T-2/EPA(bb)-2 Paa-4/Pe-4 WW/EM

ACCESSION NR: AP5015840

CZ/0059/64/000/004/0023/0029

AUTHOR: Camek, J.

36
B

TITLE: Determining the working field of a double-shaft internal combustion turbine

SOURCE: Letnany. Vyzkumny a zkusebni letecky ustav. Zpravodaj VZLU, no. 4, 1964, 23-29

TOPIC TAGS: gas turbine^{1,3}, internal combustion turbine, twin shaft turbine, working field determination, pressure loss, heat conduction

ABSTRACT: After describing the air compressor, combustion chamber, and turbine operations of a double-shaft gas turbine widely used for traction purposes, two methods of determining its operating characteristics and working field are discussed. The graphic-computation method involves presenting the operations of each subassembly — the compressor, combustion chamber, etc. — in non-dimensional graphs based on the loss of pressure at each step, shape and efficiency of blades, flow section of the generator turbine, etc. These are accompanied by theoretical computations relating air and gas compression and expansion to temperature, flow coefficients to intake and exhaust velocities, loss of pressure in the combustion chamber to velocity in the mixing nozzles, and loss of pressure before the generating turbine intake to its expansion

Card 1/2

L 57442-65

ACCESSION NR: AP5015840

ratio and loss of heat. These are all then combined in a diagram representing the working field of the whole gas turbine. This method is said to require a great deal of time and to be inaccurate at the highest and lowest expansion ratios. Attempts were therefore made to calculate states of equilibrium by digital computer, based on concrete compressor data, such as amount of air injected, degree of compression, and generator revolutions. The necessary formulas and computations are given, and it is concluded that this mathematical method is advantageous in providing several variant solutions, from which the optimal may be selected. Orig. art. has: 8 figures and 17 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00 SUB CODE: PH

NO REF SOV: 001

OTHER: 003

2/2

CAMEK, Lubomir

Transistorized automation elements. Sdel tech 12 no.2:45-47
F'64

CAMENITA, I.

Problem of offence and sanction plurality in use with the jurisdiction authority in the metrological field and the State Inspectorate for Boilers and Equipment for Hoisting. Metrologia apl 10 no.2:88-90 F '63.

TATAR, A.; GAMENTA, I.

Seizure and making measuring devices profitable. Metrologia
spl 10 no.8:374-375 Ag'63.

CAMENITA, I.; LUDOVESCU, C.

Juridical nature of metrological control conventions. Metro-
logia apl 10 no.10:463-466 0'63

CAMENITA, I.

Result of the intellectual creation as an object of juridical
relation of copyright and patent right. Metrologia apl 12
no.3:127-135 Mr '65.

CAMENITA, MARIA
SURNAME, Given Names

Country: Rumania

Academic Degrees:

Affiliation: -not given-

Source: Bucharest, Farmacia, Vol IX, No 9, Sep 1961, pp 553-561.

Data: "A Study of the Injectable Drugs Included in the 7th Edition
of the Rumanian Pharmacopoeia."

Authors:

TORJESCU, V., -Farm. Dr.-

MOISIN, Eliza, -Pharmacist.-

CAMENITA, Maria, -Pharmacist.-

SAGHIN, Maria, -Pharmacist.-

NAUM, V., -Pharmacist.-

SPD 981643

CAMENSCHI, Galina

Convergent jets at critical speed. Comunicarile AR 12 no.5:
513-517 My '62.

1. Comunicare prezentata de C. Iacob, membru corespondent
al Academiei R.P.R.

CAMENSCHI, G.; SANDRU, N.

Action of a thermal source and a discontinuous thermal field in
the interior of elastic semiplane with embedded boundaries.
Studii cerc mat 15 no. 1:3-12 '64.

DRIMUS, I.; CAMIL, J.

"Radioactive substances and ionizing radiations, and their effect upon the organism."

p. 193 (Revista De Chimie) Vol. 7, no. 4, Apr. 1956
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

CAMIL, J.

RUMANIA / Chemical Technology. Chemical Products and Their H-6
Application. Safety Engineering. Sanitary
Engineering.

Abs Jour : Ref Zhur - Khimiya, No 2, 1958, No 5167

Author : Camil J.

Inst : Not Given

Title : Some Specific Protective Measures in Work
with Radioactive Substances.

Orig Pub : Rev. chim., 1957, 8, No 1, 32-41

Abstract : Safety engineering measures in connection
with work involving radioactive isotopes are
considered, and also the corresponding sani-
tary-hygienic and legislative provisions.

Card : 1/1

Camil, L.

some special protective measures at the work with radioactive substances.

p. 32 (REVISTA DE CHIMIE) (Bucuresti, Rumania) Vol. 7, No. 1, Jan. 1957

SO: Monthly Index of East European Accessions (EEAI) IC Vol. 7, No. 5. 1958

CAMINISTEANU, Lucia, ing.

From the experience of Adeago Hosiery Mills in Bucharest
in producing knitted furs. Ind text Rum no. 3: 141-144
Mr '64.

L 34492-66

ACC NR: AP6024794

SOURCE CODE: RU/0005/65/000/007/0271/0277

AUTHOR: Camingschi, Dimitrie (Engineer)

ORG: none

TITLE: Transistor time bases

SOURCE: Telecommunicatii, no. 7, 1965, 271-277

TOPIC TAGS: transistorized circuit, oscillograph, electric measuring instrument, delay circuit

ABSTRACT: The author describes a number of transistorized circuits for the generation of linearly variable voltages, and indicates their applications as time bases for oscillographs, pulse delay circuits, time measurement devices and other instruments. Orig. art. has: 21 figures and 25 formulas. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 09, 14 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 001
OTH REF: 003

Card 1/1 *mgs*

UDC: 621.373:621.382.3

0915

2630

TEODOROVICI, Gr., conf.; IVAN, A., dr.; OANA, C., dr.; ZVORISTEANU,
Virginia, dr.; HANDRACHE, Ludmila, dr.; VANCEA, George, dr.;
MANTA, I., dr.; CAMNER, M., dr.; URNA, Mireille, dr.; BOMATIN,
Marie-Jeanne, dr.

Evolution of influenza among a group of school-age children in
the year 1962-1963. Microbiologia (Bucur) 9 no.6:523-529
N-D '64.

1. Lucrare efectuata la Institutul medic-farmaceutic, Iasi.

CAMO, E. (Edhem) Dr.

"On the breeding diseases and the protection of young domestic animals". Prof. of Zoo-hygiene at Vet. Fac., U. of Sarajivo

Vet. (Sara) 2 : 576-579, 1953

Vet. 1 : 10-16, 1954

CAHO, E.

Hygienic conditions of grazing grounds.

p. 333 (Poljoprivredni Pregled. Vol. 4, no. 6, June 1956. Sarajevo, Yugoslavia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

CAMPA, Lojze, el.inz.; VAJDA, B. [translator]

Track circuits and electronic track relay. Elektr vest 29
no.8/10:a-11--a-14 '61.

1. Zavod za avtomatizacijo (Institution for Automatization),
Sektor IV, Miklosiceva 28, Ljubljana (for Campa).

Campan, Florica. The golden section. Revista Stiintifică
"V. Adamachi" 33, 225-231 (1947). (Romanian)

Source: Mathematical Reviews,

Vol 10 No. 3

CAMPAN, T. I.										PROCESSES AND PROPERTIES INDEX									
04 The quantity of positive ions at the cathode in an electrical discharge. T. I. Campan. <i>Russ. soc. roomains</i> Phys. 36, 11 (1936). Although the mean energy of the pos. ions is very small, 85% of the current in II and III is carried by them. These differences are due to the secondary emissions and are diminished by evacuation. The same relative effects in II and the air are found throughout the pressure range 0.1-2.5 mm. R. E. DeRight										3									
458-31A METALLURGICAL LITERATURE CLASSIFICATION																			
GROUPS										RELATIONS									
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100										1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100									

RUMANIA / Atomic and Molecular Physics. Heat.

D-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9004

Abstract : the thermocouples of the second type gave higher readings (the difference reached 25% at a body temperature of 166°). When the temperature of a rotating rod was measured, the friction of the contacts caused the readings of the thermocouples to be too high. The authors consider this proof that the measurement of the surface temperature of metallic bodies is more accurate when performed by means of thermocouples with mechanical contacts.

Card : 2/2

Cămpan, T.I.

RUMANIA / Atomic and Molecular Physics. Heat.

D-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 9029

Author : Cămpan, T.I., Anghelache, D., Belous, Vitalie

Title : Concerning the Determination of the Heat Conduction of Materials.

Orig Pub : Bul. Inst. politehn. Iasi, 1956, 2, No 1-2, 321-330.

Abstract : In connection with production requirements, measurements were made of the heat conductivity of many commercial materials (raw and half-finished). A method is used, which is a version of the classical method of Greber and Jakob et al. (see Mekheyev, M.A., "Osnovy teploperedachi" (Principles of Heat Transfer) M-L, Energoizdat, 1949, pages 308-313). The determination of the heat conductivity is carried out by measuring the difference of temperatures, due to the flow of heat between plane-parallel surfaces of the investigated specimen in the form of a cylindrical disk or

Card : 1/3

RUMANIA / Atomic and Molecular Physics. Heat.

D-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 9029

Abstract : (in the case when the material cannot be machined) of plates with square cross sections. The heat is obtained from an electric heater. The source of heat is over the specimen, which in turn is mounted on a metallic base with water cooling. The heat losses in the radial direction are eliminated by means of protective rings. The protective ring of the specimen is made of the same material as the specimen itself; it is heated at the source of heat by electric current. The heat losses upwards are eliminated by another source of heat and by a correspondingly heated ring. Sixteen electric thermocouples are used to measure the temperatures, needed to observe the homogeneity of the thermal field, and also to determine the temperature drop in the body of the specimen. The authors establish the precision of the method, calculate the maximum error in connection with the sensitivity of the measuring instrument. They also determine the corrections, connected with the temperature

Card : 2/3

RUMANIA / Atomic and Molecular Physics. Heat.

D-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 9029

Abstract : drop in the metallic supports of the thermocouples, with the flow of heat between the source of the heat, the specimen, and the protective ring, when unavoidable temperature differences appear between them, with the losses of heat in the conductors of the sources and of the thermocouples, and finally, with the energy losses in the electric measuring instruments.

Card : 3/3

CAMPAN Tesdor

ROMANIA/Atomic and Molecular Physics -- Heat

D-4

Abs Jour : Ref Zaur - Fizika, No 5, 1958, No 10436

Author : Campan Tesdor, Simionescu Aurelian

Inst : Not Given

Title : Method of Determining the Heat Conduction of Materials in Non-Stationary Modes.

Orig Pub : Bul. Inst. politehn. Iasi, 1956, 2, No 3-4, 283-291

Abstract : The temperature of a half-bounded body with a surface having a constant temperature different from the initial uniform temperature of this body is expressed as a function of the difference between the surface and the internal temperature and the Fourier criterion (the function of heat conduction and time τ , during which the temperature of the surface reaches the depth x and x^2). The experimental instrument was constructed in such a way, that in that region of the investigated body where the temperature is being measured, the temperature distribution is the same as in the half-bounded body. If the specific gravity and the specific heat capacity

Card : 1/2

RUMANIA/Atomic and Molecular Physics - Heat

D-4

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 10436

of the investigated material are known, then the heat conduction can be determined only by measuring its τ , the thickness, and the temperatures on the surface and at depth x . The method given has many advantages both with respect to the shape of the specimens as well as with respect to reduction in the determination time. The results obtained by this method have been compared with the values of heat conduction obtained by the method of stationary temperature fields in the same materials, and satisfactory agreement was found.

Card : 2/2

CAMPAN, T.

21
4
Determination of the temperature of heat-exchanger walls. Teodor I. Campan and D. Anghelache. *Bul. inst. politeh. Iasi*, 17, 3, 181-4 (1957).—A graphical-analytical method for detg. the temp. t_p of a heat-exchanger wall is suggested. A value t_{op} is first assumed for the wall temp., and the required heating surface area is calcd. by means of appropriate heat-transfer relations. The assumption is then checked by back-calcn. and a new value t_{op} is obtained for the wall temp. Two sets of corresponding values of t_{op} and t_p define a straight line on a rectangular plot of t_{op} as the abscissa and t_p as the ordinate, on the same scale. The intersection of this line with the bisectrix of the right angle between the coordinate axes is the required temp. $t_{op} = t_p = t_p$. The described procedure is more precise and less time-consuming than other methods.

S. A. Stern

CAMPAN, T.

7 7
/ Determination of the thermal conductivity of liquids in an unsteady (temperature) regime. Teodor J. Campan and David Peretz. Bul. inst. politeh. Iasi [7], 3, 186-191 (1957).

5
—An app. for measuring the thermal cond. of liquids is described. The liquid is contained in a cylindrical glass vessel provided with a double bottom, and is initially at a desired uniform temp. A cooling agent is circulated through the double bottom and the temp. at a point below the surface of the liquid, along the axis of the vessel, is detd. at a specified time after cooling has been started. The measurements may be influenced by convection currents and by various

end effects, but such disturbances can be minimized by a proper choice of exptl. conditions. The accuracy of the method is discussed and thermal cond. data are reported for H₂O, glycerol, and EtOH in the temp. ranges from about 13 to 89°, 14 to 72°, and 16 to 54°, resp.

S. Alexander Stern

COUNTRY : RUMANIA H
CATEGORY : Chemical Technology. Chemical Products and
Their Applications. Instruments and Automation
ABS. JOUR. : RZKhlm., No. 23 1959, No.82568
AUTHOR : Camoan, T.; Anghelache, D.
INST. :
TITLE : Thermocouples for Measurment of Surface
Temperatures
ORIG. PUB. : Bul. Inst. politehn. Iasi, 1958, 4, No 12,
365-370
ABSTRACT : The described thermocouple has a silver
plate between the electrodes of a 0.15 mm
thickness, mounted on cork that acts as ther-
mal insulation. The time required to record
a measurment is 20 seconds. -- Z. Khaimskiy

CARD: 1/1

H - 9

CAMPBELL, F; CRAIG, G; CISLER, W.

Optimum investment in electric power for economically under-developed countries,
p. 541.

TEHNIKA (Savez inženjera i tehnicara Jugoslavije) Beograd, Yugoslavia.
Vol. 14, no. 4, Apr. 1959

Monthly List of East European Accession EEAI LC, Vol. 8, no. 6, June 1959
Uncla.

^P
CAMPBELL, I. G.
_Λ

I. G. Campbell: "On certain reaction mechanisms of hot atoms. II,"
Nuleonika, III, 1:43-52 (1958).^Λ

Published from the Inst. for Nuclear Research of the PAN, Warsaw.
Received 16 Sep 57.

CAMPBELL I. G.

Distr: 4E2c(j)/4E3d/4E2a(c)/4E3c 2 cys

19
Reactions of neutron-activated arsenic atoms in organic media. I. Formation of phenyl arsenic compounds during neutron irradiation of arsenic trichloride in benzene. K. E. Siekierska, A. Sokolowska, and I. G. Campbell (Inst. Nuclear Research, Warsaw). *J. Inorg. & Nuclear Chem.* 12, 18-29 (1959).—Di- and monophenyl As compds. are produced. Phenyl radicals may form from collision of high-kinetic-energy As atoms with C_6H_6 , or C_6H_5 may become activated by neutralizing positively charged As from a n, γ reaction. This differs from billiard-ball collision in $(C_6H_5)_2As$ irradiation.
Jack J. Ballou

6
1-5 94(NB)

Distr: 4E20

Effect of nuclear transformations on bromates. Decomposition of bromate ion under the effect of an isomeric transition. I. G. Campbell (Inst. Nuclear Research, Varsovie Zeran, Poland). *J. chem. phys.* 56, 480-6 (1959). — CHBr₃ was irradiated with neutrons from a Ra-Be source, the Br was extd. with H₂O, and the aq. phase was extd. 3 times with CCl₄ to remove CHBr₃. KBrO₃ free from Br⁻ was dissolved in the aq. phase, H₂SO₄ added to 0.08M, and kept at 40° for 1 hr. to permit isotopic exchange. After cooling, the soln. was extd. 2 times with CCl₄ and 2 times with C₂H₆ to remove unexchanged Br⁻. The pH was adjusted (usually to 7), and the soln. was agitated 3 times with freshly prepd. AgBr to remove traces of Br⁻ in lower valence states. Isomeric transition was allowed to proceed for 2 hrs. Then the proportion of Br⁻ of half-life 18 min. present in valence states inferior to BrO₃⁻ was detd. by shaking with freshly prepd. AgBr, after adding NaBr as carrier and NH₃ to prevent the pptn. of AgBrO₃, dissolving the AgBr in 25% Na₂S₂O₄, and counting with an immersion counter registering only the β-rays from 18-min. Br⁻. Depending on conditions, 13-90% of the 18-min. Br⁻ was found in lower valence states. The results can best be explained by the formation of an unstable bromite fragment by the breaking of one Br-O bond, which can be reduced to a lower valence state by MeOH, and later reoxidized to BrO₃⁻ by H₂O₂, IO₃⁻, or S₂O₈²⁻. The 18-min. Br⁻ is formed with a pos. charge up to +10 owing to the Auger effect, and charge neutralization of lower valence forms or of bromite is probably not accompanied by oxidation to BrO₃⁻. The BrO₃⁻ present is probably formed from bromite which had less than the usual pos. charge. The bromite fragments are not hydrated at high pH. The effects of an isomeric transition on BrO₃⁻ are compared with those of (n,γ) reactions on IO₃⁻ (Cleary, *et al.*, *C.A.* 47, 1503g), and on MnO₄⁻ (Libby, *C.A.* 34, 651g), and also with the results of De Vault and Libby (*C.A.* 36, 231g). H. Newcombe

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Effects of nuclear transformations on bromates. II. Comparison of the effects of neutron capture and isomeric transition. I. G. Campbell (Nuclear Research Inst., Warsaw). *J. chim. phys.* 36, 665-70 (1939).—A comparison is made in solns. of bromates and cryst. bromates of the effects of the reaction $\text{Br}^{80}(n,\gamma)\text{Br}^{81}$ and the isomeric transition $\text{Br}^{80m} \rightarrow \text{Br}^{80}$. In both cases, an unstable fragment is formed, probably a bromite, which is reducible by MeOH in some cases. The n,γ reaction leads to a more complete disintegration of the bromate than the isomeric transition; this causes in all cases the rupture of at least one Br-O bond. The recombination of the fragments in the cryst. bromates is compared for the 2 kinds of transformations. Bernard Rubin

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CAMPBELL, IAN G.

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16
Deposition of ions from aqueous solutions. II. Deposition of Ca^{2+} and P^{3+} phosphate on gold, platinum, and stainless steel. Elwira Herczynska and Ian G. Campbell (Inst. Nuclear Research Zerod, Warsaw) Z. physik. Chem. (Leipzig) 215, 248-62 (1980) (in English); cf. CA 54, 12719d, 23550e, 23978.—These depositions were studied as a function of the pH of the aq. soln. and time of contact of soln. with metal. Mechanisms accounting for anion and cation deposition observed in the present and previous papers [*loc. cit.*] are discussed. Friedrich Epstein

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